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BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15/

Date: 18-03-2015

TEST REPORT ON WET MIX MACADAM MIX
(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Improvements to Roads and Drains at Defence Colony Sahakaranagara 20th Cross Road 9th Main, B Block and 21st B Cross Road 2nd Main C Block in Ward No.08 of Kodigehalli Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15, dated 16-03-2015

Sample supplied to lab by: Sri.R.Madhusudhan, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Kodigehalli Sub-Division. BBMP, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, IV Revision-2001
53.00	100.00	100
45.00	96.00	95-100
26.50	---	-
22.40	71.30	60-80
11.20	43.00	40-60
4.75	33.00	25-40
2.36	24.10	15-30
0.600	18.60	8-22
0.075	4.90	0-8

AE-B

*As Furnished by Client

The Results relate only to the items tested

The test Reports are Accepted

18/3/2015

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DEPARTMENT OF CIVIL ENGINEERING

Date: 18-03-2015

TABLE 12 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	22.70%	Not more than 30 %
2	Impact Value	----,,----	23.60 %	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM

*As Furnished by Client

The Results relate only to the items tested.

18/03/2015

DEPARTMENT OF CIVIL ENGINEERING * BANGALORE UNIVERSITY

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BUB/CTE/2014-15/

Date: 25-03-2015

TEST REPORT ON BITUMINOUS MIXES
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: Testing of Bitumen Premix Sample (Semi Dense Bituminous Concrete-SDBC).
{Project*: Improvements to Roads and Drains at Defence Colony Sahakaranagara 20th Cross Road 9th Main, B Block and 21st B Cross Road 2nd Main C Block in Ward No.08 of Kodigehalli Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15, dated 23-03-2015

Sample supplied to lab by: Sri.R.Madhusudhan, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Kodigehalli Sub-Division. BBMP, Bangalore.

TEST RESULTS:

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.03%**
2. **Gradation Test** :

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-15 of MORTH Specifications-2001 (Grading – 2)
13.2	**100**	100
9.5	**98.00**	90—100
4.75	**45.10**	35—51
2.36	**34.20**	24—39
1.18	**24.10**	15—30
0.3	**18.00**	09—19
0.075	**4.20**	03—08

AE-B

* As furnished by Client.

The Results relate only to the items tested.

The test Reports are Accepted

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Received 6

25/3/2015
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Date: 25-03-2015

TABLE 12 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	**24.20%**	Not more than 30 %
2	Impact Value	----„----	**25.30 %**	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM
3	Water absorption	----„----	**0.50%**	Not more than 1.0 %
4	Stripping test. (Coating and stripping of Bitumen aggregate mixtures)	----„----	**97.20 %**	Minimum retained coating 95.0 %

*As Furnished by Client

The Results relate only to the items tested.

DEPARTMENT OF CIVIL ENGINEERING BANGALORE UNIVERSITY

25/03/2015

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BUB/CTE/2014-15/ Date: 22-03-2015

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28 days Compressive Strength).
{Project*: Improvements to road and drains at Defence Colony Sahakaranagara 20th Cross road 9th Main, B Block and 21st B Cross road 2nd Main ,C Block in Ward No.08 of Kodigehalli Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15, dated 21-03-2015

Sample supplied to lab by: Sri.R.Madhusudhan, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Kodigehalli Sub-Division, BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

Location* : Covering Slab

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	21-02-15	21-03-15	28	22500	500	22.22	**22.36**
	002	"	"	"	"	510	22.66	
	003	"	"	"	"	500	22.22	

*As Furnished by Client.

The Results relate only to the items tested

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BUB/CTE/2014-15/ Date: 21-03-2015

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28 days Compressive Strength).
{Project*: Improvements to road and drains at Defence Colony Sahakaranagara 20th Cross road 9th Main, B Block and 21st B Cross road 2nd Main ,C Block in Ward No.08 of Kodigehalli Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15, dated 20-03-2015

Sample supplied to lab by: Sri.R.Madhusudhan, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Kodigehalli Sub-Division, BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{15}

Location* : Drain

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	20-02-15	20-03-15	28	22500	410	18.22	**18.07**
	002	"	"	"	"	400	17.77	
	003	"	"	"	"	410	18.22	

*As Furnished by Client.

The Results relate only to the items tested

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FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

Date: 18-02-2015

BUB/CTE/2014-15

1. TEST REPORT ON REINFORCEMENT STEEL :

Sub: Testing of Reinforcement Steel of diameter 10mm.
{Project*: Improvements to road and drains at Defence Colony Sahakaranagara 20th Cross road 9th Main, B Block and 21st B Cross road 2nd Main ,C Block in Ward No.08 of Kodigehalli Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15, dated 17-02-2015

Sample supplied to lab by: Sri.R.Madhusudhan, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Kodigehalli Sub-Division, BBMP, Bangalore.

TABLE – 1

SL No	Details	For 10mm	
		Test Results	Min Req as per IS 1786-2008
01	Observed diameter of bar	**10.0mm**	10.0mm
02	Observed Wt/m Length **Kg/m**	**0.621**	0.567
03	Proof stress/Yield stress, fy , **N/mm²**	**550.0**	500.0
04	Bend/ Re bend Test	**Ok**	---
05	Percentage of Elongation, %	**20.50**	12.00
06	Ultimate Tensile Strength **N/mm²**	**620.0**	545.0

*As furnished by Client.
The Results relate only to the items tested.

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